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ON THE SURGICAL TREATMENT OF NASO-PHARYNGEAL POLYPI.

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IT has long been known that a class of fibrous growths, sometimes recurrent and sarcomatous, had for their *habitat* the top of the pharynx and the posterior nares. These are quite different from the ordinary mucous polypi of the nasal passages, and are much more formidable.

Two varieties exist. The one, and more common, grows from the body of the occipito-sphenoid bone, or roof of the pharynx; starting from the periosteum, filling the pharynx, obstructing the posterior nares, hanging down below the soft palate, and interfering with deglutition, and, in extreme cases, with respiration. The other, less frequent, originates in the spheno-maxillary fossa, and thence pushes out into the zygomatic fossa, forwards towards the nose, and upwards into the spheno-maxillary fissure. Neither of these forms infiltrates neighboring tissues like cancer, and rarely contracts adhesions. They advance by pressure and absorption, and destroy neighboring parts by their growth. They recur, unless the attachment of their root to the periosteum is wholly destroyed, but not otherwise.

Either of these forms may, however, on recurrence after insufficient removal, become softer, less fibrous, more cellular and more malignant.

In the worst cases, the naso-pharyngeal polypus may push out its processes into every adjacent cavity, as the nares, the antrum, the ethmoidal and sphenoidal cells, or the sphenoidal fissure, inside the cranium.

The various operations resorted to for the removal of these foreign growths have been recently reviewed by Dr. H. B. Sands, of New York, whose paper on this subject will form the basis of this communication.* While excellent as a *résumé*, and interesting for the case there described, the article by Dr. Sands has one important omission, and is also, as it seems to us, open to criticism in the surgical deductions which he draws as to the advantages of his method of operating. After mentioning the varieties, symptoms and clinical history of naso-pharyngeal polypi, and showing how important it is to diagnosticate the exact site of the pedicle or root of the tumor, Dr. Sands remarks

* On Naso-pharyngeal Polypi. By H. B. Sands, M.D., Professor of Anatomy in the College of Physicians and Surgeons, Surgeon to the Bellevue and Roosevelt Hospitals. Re-printed from Dr. Brown-Séquard's Archives of Scientific and Practical Medicine. New York. 1874.

that, on the dead subject, the pharynx can be explored through the mouth, and that the finger will reach quite to the summit of the pharynx. He claims, also, that, on the living subject, the pedicle of the tumor can be distinctly traced up to its attachment to the occipito-sphenoid bone, with the finger in the fauces pushed up behind the soft palate.

Most persons find it impossible to reach higher than the orifice of the posterior nares, when the pharynx is empty; the difficulties of exploration are much increased by the presence of a tumor; and the surgeon must have a very long forefinger—the patient, too, being exceptionally tolerant of manipulation—to enable him to touch the occipito-sphenoid bone.

The treatment pursued by surgeons is one of the following operations:—

1. Avulsion.
2. Ligature.
3. Galvano-cautery.
4. Caustics.
5. Electrolysis.
6. Excision.

(1.) "Cases suitable for avulsion are rare; and, in most instances, the attempt to extract the polypus by the forceps fails." Neither is this mode of operation free from danger. Dupuytren once tried to extract a polypus through the mouth with the forceps. He only partially removed it, and there was a copious hæmorrhage. The following morning, the patient was found dead in his bed.

Mr. Cooper Forster recently attempted the same operation. Profuse bleeding occurred at the time; subsequently, headache, aphasia and convulsions. The patient died on the twelfth day. On *post-mortem* examination, the cribriform plate of the ethmoid was found broken, probably by the avulsion of the polypus. This operation, then, so successful with the simple nasal polypus, should be restricted to that form.

Guérin, we are told, used a still more rude, and probably dangerous plan, namely, to pass the left forefinger up to the pedicle of the tumor, by the mouth, and then with the right hand, manipulating by the nose, the tumor was torn from its attachment by a raspatory.

(2.) The ligature has been successfully used, and was the classical mode with the old writers; but this is not sure nor free from danger. The pedicle of the tumor, if small, is surrounded by a loop of silk, or hemp, and both ends brought out of the nostril. A double silver canula (Gooch's canula, much used by the old surgeons for polypus of the uterus) is then made to glide over the threads, through the nose, and, when in contact with the pedicle, the ligature ends are drawn tight and secured. Ulceration of the pedicle takes place, and the tumor sloughs off and is withdrawn through the mouth. Although a portion of the pedicle is left behind, yet, as in uterine polypus, it may shrink away, and not grow again. It is, however, apt to return, and the use of the ligature occasionally causes death—one case (Gunther's) of death by suffocation, from the falling of the tumor into the larynx. Other cases have terminated by œdema of the glottis, and others by pyæmia. Winter, Dr. Sands tells us, operated by ligature, but on the fifth day the putrid odor of the tumor was insufferable. On

the seventh day, respiration and deglutition were so greatly embarrassed that the surgeon was obliged to seize the growth and tear it away.

(3.) The galvano-caustic ligature is very useful sometimes, especially in completing the work begun by the knife. "It has the great advantage over the ordinary ligature of causing the separation of the growth, at the time of the operation." So, too, have the écraseur and the chain-saw, both of which have been successfully employed. These latter methods, used alone, leave the growth behind; and they cannot be used at all, except where the pedicle is small, or well defined and accessible.

(4.) The use of caustics is condemned by Dr. Sands. The deep situation of the tumor, and the danger of caustic action extending on to the pharynx, and even into the larynx, is reason enough for their disuse; besides which they are not radical.

(5.) Electrolysis, like the galvano-caustic ligature, or other caustics, is useful as an auxiliary to more direct surgical means, rather than by itself. "Electrolysis is tedious, laborious and uncertain." In one case, reported as successful, no less than one hundred and thirty sittings were required to destroy the growth. A large fibrous polypus cannot be destroyed by this agent. The galvano-cautery is much speedier and surer. "I am satisfied," says Dr. Sands, "that neither in the removal of large naso-pharyngeal polypi, nor of any large tumor, except, perhaps, one composed of erectile tissue, can electrolysis be accepted as a substitute for the knife."

(6.) Excision. The tumor may be reached through the mouth, or by the resection of some of the bones of the face. The excised bones may be taken away altogether, or they may be replaced, after the extirpation of the tumor. We designate the first as an excision of the upper jaw, or portions of it; the second, as a *displacement* of the upper jaw, or an osteo-plastic operation.

Operations through the mouth are as old as Hippocrates, but were chiefly revived and advocated by Nélaton. The polypus is exposed by slitting open the soft palate and uvula in the median line, and, after removing the foreign growth, by closing the wound in the palate by sutures. In some cases of large polypus, additional room to manipulate has been gained by excising a portion of the hard palate. When we consider the distance of the occipito-sphenoid bone from the orifice of the mouth, the darkness, and obscurity by hæmorrhage, and also the fact that cutting away the hard palate unveils the nares, rather than the pharynx, we shall conclude that this is not the most direct and simple way to reach a naso-pharyngeal polypus.

Total excision of the upper jaw was practised successfully in 1840, by Flaubert, and, it is claimed, by Syme, in 1832. "It has been repeatedly done, and is praised by Michaux, Robert and others." It is undoubtedly the most direct and perfect way to explore the naso-pharyngeal cavity, and hence to extirpate foreign growths. But it entails a great mutilation; the orbit, nose and mouth are practically thrown into one cavity, and it is adapted only to tumors of the antrum, or spheno-maxillary fossa, which are malignant and infiltrate neighboring tissues, as cancer does.

Partial excision of the upper jaw, for the removal of a naso-pharyngeal polypus, was first practised by Maisonneuve in 1860. The upper lip is slit up into the nostril, and the flap of the cheek retracted.

The upper jaw-bone is then denuded of flesh; the mucous membrane of the hard palate is divided in the median line, and the soft palate cut away from the hard palate, for one half of its extent. An incisor is drawn, strong bone forceps are introduced into the nose and mouth, and the alveolar process and hard palate divided. One blade of the forceps being still in the nose, the other is applied horizontally to the external surface of the upper jaw, beneath the malar tuberosity, and the walls of the antrum are divided. This separated, half of the upper jaw is then torn away. It contains the alveolar process and teeth of one side, the palate process, the lower two-thirds of the antrum, and part of the pterygoid process. The polypus is then removed, and the soft parts sewed up.

"Five osteo-plastic methods deserve description, namely: two devised by Langenbeck, one by Huguier, one by Roux, and one by Dr. Cheever, of Boston."

Langenbeck's simpler and milder operation consisted in cutting open and turning upwards on to the forehead the nasal bone and nasal process of the superior maxillary bone, so as to expose the nasal cavities of one side. After removing the polypus, the bones are restored to place, and unite again. We find, on research, other modes as follows: Chassaignac proposed an operation to cut up the entire nose from the left cheek, and turn it over, bones and septum included, on to the right cheek. He admits, however, that deformity follows this operation. Boeckel carried out the same method, but preserved and restored the nasal bones. Verneuil has published a method of opening the nose from the side, by lifting the alar cartilage and nasal bone, toward the septum. Lawrence (1862) operated by cutting the septum and both alæ from below, and drawing the nose upwards and backwards, so as to expose the middle and lower meatus.

Dr. Sands has overlooked, or omitted, in this connection, the osteoplastic operation of M. Ollier, of Lyons. This is by far the best operation done by displacement of the nose.

M. Ollier* calls this "a new operation for the removal of naso-pharyngeal polypi," and first published it in 1864.

He describes it as "*osteotomie verticale et bilatérale des os du nez.*" It is very simple, and consists of four steps, as follows:—*(a.)* A horseshoe incision, down to the bone, starts from the level of the right ala of the nose, ascends obliquely to the highest point of the naso-frontal junction, just below the eyebrows, in the middle line, and descends obliquely to the left ala. A narrow saw, placed flat against the orbital ridges, now divides the bones, down through this incision, to the alar cartilages. The septum and alæ are snipped, to a slight degree, with scissors, and the nose is turned upside down, and hangs by the alæ and septum near the lip.

(b.) The nasal passages are now opened, but it is found that the septum is in the way; this is broken and forced aside by pushing in the finger, without rupturing the mucous membrane. In this way, ample room is given to see and reach back into the naso-pharyngeal region.

(c.) The occipito-sphenoid bone and the attachment of the foreign growth are now easily reached by the finger; it is torn away with strong forceps, or severed with curved scissors, and, lastly, all the

* Traité Experimentale et Clinique de la Régénération des Os, et de la Production artificielle du Tissu osseux. Par L. Ollier, Chirurgien en chef de l'Hôtel-Dieu de Lyon. Paris. Victor Masson et Fils. 1867. Tome second, pp. 482, et seq.

pedicle and periosteum to which it is attached are rasped away from the bone, and the chance of recurrence prevented.

(d.) The nose is restored to place. It fits perfectly at the sawed portions, and hence it unites without deformity. The vascular supply from the branches of the facial artery (the superior coronary, lateral nasi and angular arteries) running from below upwards, ensures ample nutrition to the flaps.

The nose, says M. Ollier, does not lose its warmth, and becomes only slightly livid. In no case was there a failure to unite. In one case the patient imprudently blew his nose with his handkerchief the fourth day after operation, but no harm resulted. The skin unites by first intention. The bones stiffen in two weeks. Ossification of the callus (provisional) occurs in about six weeks. One of the chief difficulties of the operation, he continues, is to detach the polypus, so solidly is the fibrous tissue implanted in the periosteum. The anterior opening through the nasal orifice gives the best and safest direction in which to make traction for its removal. "We have no confidence, as regards recurrence, save in removal followed by the rasp, until we can feel the osseous tissue of the basilar process quite denuded." As regards the room for manipulation by Ollier's operation, he has removed, in this way, a naso-pharyngeal polypus, weighing 205 grammes—"perhaps the largest fibroma which has been taken away from this region."*

Having performed Ollier's operation upon the living subject, we can bear personal testimony to the ease, safety and excellence of this operation. And unless in growths so exceptionally extensive as to invade the spheno-maxillary fossa or antrum, when Langenbeck's second method would be indicated, we should prefer it to any form of displacement of the jaw.†

There are, however, other and milder ways of reaching the antrum, without subsequent deformity.

Ollier proposes to accomplish this by deepening his section of the nose, and carrying the section obliquely backwards, and thence forwards, to the soft parts.

Roser, of Marburg, in his Surgical Anatomy,‡ gives a section to display the antrum and nasal fossæ, which we have practised in demonstrations on the dead body, and which seems well adapted to uncover growths lying in the antrum, nasal passages, &c. Starting from the centre of the nasal depression below the eyebrows, like Ollier's, this section goes obliquely backwards through the upper jaw, antrum, alveolus and palate, to a point between the second molar and the wisdom tooth. The cheeks are incised, and the whole hard palate and floor of the antrum can thus be inverted, and depressed below the teeth of the lower jaw. It gives an admirable *exposé* of the region, and we see no reason why it should not succeed as an osteo-plastic operation.

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* 1 gramme = 15·43 grains. 205 grammes = 6 oz. 4 dr. 43 grs. Troy. Op. cit., p. 486, &c.

† The following extract from a letter received from M. Ollier, strengthens my belief in the merits of his operation:—

"Lyon, 20 Mars, 1873.

"J'ai lu avec la plus grand satisfaction votre belle operation d' écartement de la joue pour l'ablation d'un fibrome naso-pharyngien. C'est un success d'autant plus interessant que les cas semblables (Huguier, Langenbeck) avaient donné lieu à des accidents tardifs (suppuration, chute des dents, etc.). *Pour moi, je m'en tiens toujours a l'abaissement du nez; j'ai pratique plus de 20 fois cette operation," etc.*

‡ Manual of Surgical Anatomy. By W. Roser, Professor of Surgery in the University of Marburg. Translated by John C. Galton, M.A., &c. London: Henry Renshaw. 1873.

Langenbeck's second operation is to reach the spheno-maxillary fossa. To understand the possibility of making the first bony section of this operation, we must remember that the presence of a tumor expands by absorption the fossa, and the spheno-palatine foramen. A curved incision was made from the ala nasi to the middle of the zygomatic arch; a second, from the nasal process of the os frontis, along the lower border of the orbit, to meet the first. The finger was pushed back into the spheno-maxillary fossa and a narrow saw passed on the finger through the dilated spheno-palatine foramen, and the jaw sawed across, horizontally, from behind forwards. The second saw-cut was made from below upwards through the zygoma and frontal process of the malar bone, into the spheno-maxillary fissure, and thence through the orbital plate of the superior maxillary bone, as far as the lachrymal bone. The resected portion of the upper jaw was then connected only with the nasal bone and nasal process of the frontal bone. The resected piece was then pried up and turned back over the nose. The spheno-maxillary fossa was thus fully uncovered, and also the posterior nasal fossa. The polypus was removed, and the bone replaced. Bony union took place in eighteen days.

Huguier's osteo-plastic operation for polypus was as follows: An incision was made from the angle of the mouth to the masseter; a second, around the ala nasi and down the median furrow through the upper lip. This triangular flap was turned up and exposed the upper jaw. A transverse incision separated the hard from the soft palate. The jaw was sawed horizontally from the posterior tuberosity through the antrum, to the floor of the nares. An incisor was drawn, and the hard palate was grooved with the saw, in the median line. The base of the pterygoid process was severed by strong bone forceps. By prying with a chisel, the jaw was luxated downwards, and towards the median line. Through this opening, the pharynx was exposed, and a large polypus removed from the basilar process. The jaw was then replaced. It was with difficulty kept in position, and after eight months there was no bony union. Necrosis and shedding of a sequestrum followed.

"An operation essentially the same as Huguier's," says Dr. Sands, "was performed in 1867, by Dr. Cheever. In this case, only one external incision was made, by the side of the nose to the angle of the mouth, and the pterygoid process was not divided." We would call attention to other points of difference. The soft palate and the hard palate were untouched by knife or saw. The only bony section by the saw was through the antrum, horizontally, from the posterior tuberosity of the upper jaw, into the nares. The alveolus only was cut with bone forceps. The pterygoid attachment and the hard palate were broken, the latter at the symphysis, by forcing the sawed lower half of the upper jaw downwards and inwards. Thus the entire mucous membrane of the mouth was left untouched. The tumor was cut away, and the base rubbed with fuming nitric acid; and it recurred. In eleven months, the second operation was done through the same incisions as the first. Bony union had taken place. This time, the tumor was removed, and the root and periosteum scraped away from the basilar process. It never recurred again, and nearly six years have now elapsed. Bony union took place after the second operation. There was never necrosis, or falling of teeth. Six weeks after the

first operation, he was able to chew. Twenty-seven days after the second operation, he was discharged from the hospital, with the jaw firmly in place. We have always ascribed these very perfect reünions to the fact that extensive vascular connections were preserved unbroken in the mucous membrane of the mouth and pharynx.

Roux's osteo-plastic operation is practically a resection of the superior maxillary and malar bones, without taking away the fragment. All the sections of bony attachments are made, as in an excision. The four classical sections are made through the frontal process of the malar bone, the zygoma, the nasal process of the superior maxillary and the alveolus and hard palate. In addition to this, the pterygoid attachments are cut away with a chisel. The upper jaw and malar bone, thus wholly detached, are forced upward and outward, until the interval between the two superior maxillary bones is wide enough to get access to the polypus. Should more room be needed, the other superior maxilla is to be displaced also. After the operation, the upper jaw bones are to be restored to place. Whether or not they will survive this wholesale sawing and cutting is unknown, since, we believe, the operation has never been done on the living subject.

The following extract from Dr. Sands's monograph describes the fifth and last osteo-plastic operation for polypus :—

"Lastly, Dr. Cheever, of Boston,* performed an osteo-plastic resection of both superior maxillæ, for the removal of a naso-pharyngeal tumor of unusual size. The operation is thus described:—'The primary incision through the soft parts was on either side of the nose, along the natural wrinkle from near the inner canthus, around the alæ, and through the commissure of the myrtiform fossa of the lips. The flaps were reflected, so as to expose the bone beneath as far upward as the malar prominences. With a narrow saw the body of the bone was divided from the tuberosity, forward, beneath the zygoma, on each side into the middle meatus. The septum nasi and the vomer were divided with strong scissors. Nothing but the posterior attachments of the upper maxillæ now prevented their depression; and, hinging on the pterygoid processes, the upper jaw was brought down so as to expose the tumor. Its attachments were found to be to the body of the sphenoid bone, and to the ethmoid. These attachments, except the first, were divided by the finger, and a section of the growth was made by means of scissors as near the sphenoid bone as possible, the mass being too large to deliver altogether. With a gouge chisel, the remaining portion was scraped away and removed. The whole growth was in size and shape like a large lemon. The depressed jaw was returned to its position, and retained firmly by silver wire passed on each side through the malar bones. The soft parts were opposed by silk sutures, and the whole physiognomy perfectly reinstated.'

"Dr. Cheever's operation is ingenious, and is not, I should judge, very difficult of execution. Although it terminated fatally in the single instance in which it has been performed, I agree with Dr. Cheever in thinking that there is no danger inherent in the operation that ought to prevent its repetition."

We may be allowed to add that the vascular supply for the repair of the bony sections in this operation is excellent, since we have the whole palatine arch and both alveoli uninjured. The patient was in an exhausted and anæmic condition before the operation, and would have been likely to succumb from either of the other operations.

In reviewing these osteo-plastic operations, Dr. Sands is disposed to be dissatisfied with them all. Langenbeck's first mode he acknowledges is well adapted to nasal polypi. We agree with him in think-

* Medical and Surgical Reports of the Boston City Hospital, 1870, p. 164.

ing that Langenbeck's major operation should be restricted to tumors growing in the spheno-maxillary fossa. Roux's operation, also, he is right in saying involves too great mutilation of the facial bones, without corresponding benefits, either in opening up a way to the polypus or in the chance of restoration of the parts.

Of the other modes, he says:—

"Huguier's operation has been performed by its inventor, and, with slight modifications, by Dr. Cheever, of Boston. Both patients recovered; but one circumstance in each case deserves to be mentioned. In Huguier's case, necrosis occurred, and a portion of the resected bone exfoliated, the remainder failing to unite by osseous union. In the patient treated by Dr. Cheever, the tumor recurred a year after its removal, and resection had to be performed a second time in order to expose it. These facts constitute objections to the operation, and the liability to recurrence of the disease after removal offers a strong argument against osteo-plastic operations generally."

An ingenious, but fallacious objection. We shall see, farther on, how his case, treated by excision, fared in these respects. After disposing of the osteo-plastic operations, he goes on to say:—

"Finally, let us endeavor to determine the value of ordinary excision of the upper jaw, either partial or total, as a preliminary operation. It may be remarked, in passing, that excisions of the upper jaw are, as a class, remarkably successful operations. The objections that apply to them are mainly owing to the disfigurement which they produce. We shall have occasion presently to see that this objection is almost groundless, so far as the operation of partial excision is concerned. In the next place, it may be stated that excision of the jaw affords easier access to the pharynx than any of the other methods, and thus enables the operator to attack the pedicle with the maximum chances of success. Accordingly, the probability of a recurrence will be correspondingly diminished. Neither the operations through the mouth, nor any of the osteo-plastic procedures which have been described, permit that satisfactory exposure of the base of the skull which is afforded either by partial or total resection of the superior maxilla; and it must be evident, from what I have already said, that ample space is necessary, both for the thorough extirpation of the tumor, and for the prompt arrest of the hæmorrhage that so often accompanies its removal.

"After an osteo-plastic operation, recurrence is not so easily detected; and when it does take place, the entire operation must be repeated. It remains to be ascertained, whether partial excision of the jaw, after the method of Maisoneuve, will not fulfil all the indications presented."

We now quote the description of his operation, performed by partial excision:—

Case.—J. D., aged 20. October, 1872. Symptoms for a year past: pressure, obstruction and hæmorrhage. A large tumor was discovered distending the pharynx, and visible below the free edge of the soft palate. First operation, October 17th, through the mouth; one half the soft palate was cut and turned back. The hard palate was partly absorbed. The écraseur was slipped around the root of the tumor, which was attached to the base of the skull. The chain broke. The pedicle was then divided by scissors. Copious hæmorrhage followed. This finally ceased, in consequence of the prostration of the patient, who had several attacks of syncope. The patient rallied, but the tumor soon began to grow again. The recurrent growth presented "a fungous-looking mass in the mouth, extending forward and laterally nearly as far as the dental arch. It had grown firmly adherent to the posterior border of the septum narium." "I now decided to operate again, by making a partial excision of the jaw, and to remove the principal mass of the tumor with the galvano-caustic ligature.

"On May 10th, the patient was etherized, and I operated as follows: With

a scalpel, the tissues of the face were divided down to the bone, along a line extending from just below the right inner canthus downward beside the nose and around its right ala into the opening of the nostril; thence along the junction of the skin and mucous membrane to the middle line, and along the latter to the free margin of the upper lip, the latter being completely divided.

"The flap thus marked out was reflected upward and outward sufficiently to admit of the next step of the operation, as follows:—

"With a straight, narrow, button-pointed saw, known as Langenbeck's, the malar process of the upper jaw-bone was divided upward and inward (the right central incisor having first been drawn), and into the upper end of the saw-cut a trephine centre-pin was entered, and a circular hole made into the antrum, to admit one blade of a large cutting bone-forceps, the other blade being passed into the inferior meatus of the nose.

"With this instrument, thus entered, the section of the front and inner walls of the antrum was completed. With the same instrument, the hard palate was divided on the right side, close to the septum. The soft palate was then separated with scissors curved on the flat, from the hard palate, and the detachment of the lower part of the upper jaw completed by grasping it with Fergusson's lion-toothed forceps, and wrenching it away, the lower part of the pterygoid process coming with it. The inferior turbinated bone, which projected into the cavity thus left, was pulled away, and ready access to the tumor was then obtained.

"The tumor was found, like its predecessor, to be attached to the basilar process of the occipital, and the body of the sphenoid bone, and was adherent to the posterior free margin of the septum and hard palate, and to the right pterygoid process.

"The palatal and pterygoid processes, and the vomer, were all thinned, and in parts absorbed.

"The connection of the tumor with the septum, hard palate and pterygoid plate were first divided, partly with the scissors and partly with the finger, a very large part of the septum, and nearly all the remains of the hard palate, being removed by the process.

"The pedicle, which was very broad, was then surrounded, near the base of the skull, with a loop of platinum wire, and the latter connected with from two to three cells of a Grove's battery, the larynx and pharynx being protected by wet sponges from the leakage of heated fluids. The tumor was divided by the galvano-caustic wire in six minutes, without the least hæmorrhage.

"Examination now showed a considerable portion of the pedicle still remaining, and to this the galvano-caustic loop was again applied. Other smaller portions were removed with the fingers, aided by a large rugine, and the last piece left, in part, with scissors. The use of the latter was followed by a certain amount of bleeding, soon checked by the application to the stump of the galvano-cautery, and the persulphate of iron, aided by pressure, and by the ligation of an artery in the pterygoid fossa.

"After all had been removed of the tumor that could be, a small prolongation of it was discovered running into the sphenoidal cells; and this I deemed it imprudent to attack.

"The flap of soft tissues was now replaced in position, and secured by one twisted and a number of interrupted sutures of silver and fine silk.

"Very little blood was lost during the operation, which lasted at least two hours, nor did what was lost penetrate the glottis to any dangerous degree. . . . . .

"Microscopic examination showed the tumor to be essentially fibrous, the bundles of fibrous tissue being mingled with a certain amount of young cells, which were especially numerous beneath that point on the free surface of the growth from which the first tumor had been removed.

"The patient recovered rapidly after the operation, and was allowed to sit up on the ninth day, union by adhesion having taken place through the entire extent of the external wound."

There can be little doubt, in our opinion, that this was a case more suited to the operation of total extirpation of the jaw, than to any partial excision, or osteo-plastic operation. The growth was rapid; "fungous;" the seat of previous hæmorrhages; it penetrated even to the sphenoidal cells, and it contracted adhesions. Had the whole jaw been taken away, perhaps even readier access would have been got to the upper limits of the tumor. At any rate we submit that the history of this case affords no argument against the utility of osteo-plastic operations in cases of ordinary fibrous polypus, since they are not strictly comparable with it. Neither can it be asserted that a displacement of the jaw, as in our case, would give rise to a greater chance of recurrence than this excision after Maisonneuve, where a portion of the growth was left behind. The whole point of recurrence turns upon the place from which the tumor grows. Experience proves that a growth confined to the body of the occipito-sphenoid bone will not grow again if the periosteum, in which it is implanted, is rasped away from the bone. The history of twenty operations by displacement (Ollier's operation), proves that this region can be effectually reached, and cleared of even the largest polypi, without excising or taking away any portion of the bony structures of the face. Our own case of two operations on the same patient proves that a recurrence can be detected, operated on and cured, by a repetition of the operation for displacement of the upper jaw, and that complete repair will take place, after new osseous growth is cut through and replaced for the second time. It seems to have been overlooked that we possess, in the laryngeal mirror and the rhinoscope, a ready means of viewing the condition of the pharynx, and the commencement of any recurrent growth. This was used by an expert on our patient, before the second operation.

After a thorough review of all the measures which have been adopted to remove naso-pharyngeal polypi, we feel justified in drawing the following conclusions:—

1. The excision, partial or complete, of the upper jaw is applicable only to the removal of tumors which grow from, or are attached to, some portion of that bone.

2. Tumors having their origin either in the spheno-maxillary fossa, the posterior nares, or the body of the occipito-sphenoid bone, can be attacked and completely removed by one of the operations for displacing the upper jaw, or the nose.

3. In this second class of cases, to remove any portion of the bony structures of the face, when they are unaffected by disease and could be displaced and restored, is to cause a needless mutilation, and is contrary to sound principles of conservative surgery.

4. For tumors in the spheno-maxillary fossa, Langenbeck's major operation is applicable.

5. For the growths in the posterior nares and top of the pharynx, Ollier's operation by displacing the nose; or Huguier's operation, modified by us in keeping the vascular connection of the palate and pterygoid processes unbroken, will either of them prove sufficient to eradicate the disease.

6. In very large tumors, there is no reason, *à priori*, why our operation of displacing the *whole* upper jaw should not succeed.

Progress in Medicine.

REPORT ON DERMATOLOGY.

By J. C. White, M.D.

Vaccination.—At the third International Medical Congress, which was held in Vienna in September of last year, the committee, previously appointed to examine the question of vaccination in all its bearings, presented its report through Dr. Kaposi (*Archiv für Dermatologie und Syphiligraphie, v. Jahrgang, 3 u. 4 Heft*). The conclusions of the committee were expressed in question and answer form, and they may be briefly presented here in the same manner.

Shall vaccination be generally performed?

The answer is unreservedly in the affirmative. All observation, based upon its action upon individuals and masses, during severe epidemics and at other times, on its relations to the frequency, intensity and mortality of smallpox, has demonstrated that it is a positive and great, if not an absolute, protection against this disease; and that variola is as deadly an affection to those not vaccinated as it was before the introduction of vaccination. The practice should also be made obligatory, as whatever may be said in relation to the principle of personal freedom, the State cannot permit one person to be a source of danger to another.

Shall humanized or original cow-pox lymph be used in vaccinating?

Experience has taught that the original lymph takes less surely, and sometimes produces intense local effects, which may be the source of dangerous or even fatal processes, while the humanized is more sure, is easily obtained, and but seldom produces undesirable or threatening local or general effects. In general, therefore, the latter is to be recommended. Inasmuch, however, as a part of the public entertains a fear of humanized lymph, as the possible bearer of disease from person to person, and inasmuch as a frequent regeneration of lymph can do no harm, lymph from either source may be used according to individual desire.

How should the lymph be taken?

From a well-developed vaccine pustule when its contents are perfectly clear and transparent, that is between the eighth and tenth day, and only so much should be collected as flows spontaneously and without pressure in clear drops after pricking.

How shall it be preserved?

Three methods are recommended: 1. In capillary tubes; 2. Drying it upon lancet points; 3. Suspending it in glycerine.

At what season and at what age shall vaccination be performed?

The same good results and the same impunity are to be obtained at all times of the year and conditions of the weather; and the earlier in infancy it is performed the better. A healthy child four or five days old will bear the process without any perceptible sympathetic disturbance of the economy.

How long does the protection afforded by vaccination last?

This is a queston not easily answered. It seems quite certain that with many persons this power diminishes in course of the second de-

cennium. It is also certain that many vaccinated persons remain until their latest age protected against variola and vaccinia.

Is variola as frequent and does it run the same course in individuals in whom the vaccination scars are large and deep, as in those where the scars are small, flat and insignificant?

The observations hitherto made fail to discover any difference, or to allow any conclusion in this respect.

Can syphilis be communicated, through the vaccine lymph taken from a child with hereditary syphilis, to a healthy one; or is its development in every case due to inoculation with the fluid taken from syphilitic efflorescences?

So far as experiment has taught, the danger of communicating syphilss, when only pure lymph is taken from the vaccine pustule of a manifestly syphilitic person, is nearly null; and the opinion is corroborated that it is only when blood or the tissue from some syphilitic product is also taken from the syphilitic subject, that such conveyance is possible. The diagnosis between a vaccine and a syphilitic pustule may always be determined with the exercise of proper care.

How is the frequently observed failure of reception of vaccination to be explained?

We are at present unable to account for it; it is analogous to the refractory relation of some individuals to contagious diseases.

Is there reason to suppose that this circumstance may be due to long-continued vaccination with the same lymph?

There are no grounds for the belief that lymph continued from one generation to another takes any less surely, or loses any of its protective power. For various reasons, however, the occasional regeneration of lymph by retrovaccination is advisable.

What diseases are produced by vaccination?

The affections which are occasionally seen as the result of vaccination, are such as may occur in consequence of other specific irritations of the skin—erythema simplex et bullosum, eczema, lymphangoitis, erysipelas, and adenitis suppurativa. The last three are more common in vaccination with original lymph and in revaccination, and in hospitals also, than in private practice, and when humanized lymph is used. The first two complications are of no consequence to the welfare of the economy; the last may, under some conditions, give rise to fever and other dangerous results. In fact, however, all these complications are extremely rare.

After long discussion of many of the points presented in the report of the committee, by physicians from all parts of the civilized earth, the following vote, proposed by Professor Hebra, was adopted (155 in the affirmative, 6 in the negative):—

The third International Medical Congress declares vaccination to be necessary, and recommends to all governments that it shall be made obligatory.

Erysipelas.—Perroud, of Lyons, describes (in the *Annales de Dermatologie et de Syphiligraphie*, tome cinquième, No. 3) a series of cases of an affection he calls *érysipèle rheumatismale*. The appearances were in all of them of a very mild character, consisting of a fugitive redness and œdema, followed by desquamation, alternating, at times, with the articular inflammation. It is hard to see how they differ from the simple fugacious forms of erythema, which, as is well known, not infrequently complicate rheumatism.

Kaczorowski gives (*Berliner Klinische Wochenschrift*, and *Archiv für Dermatologie und Syphiligraphie*, 1873, 3 and 4 Heft) a new method for the treatment of erysipelas. Since its introduction into the hospitals of Posen, there has been, he says, no fatal case or relapse noticed. The affected portions of skin are rubbed gently every three hours with a mixture of carbolic acid and turpentine (1 to 10), while the surrounding parts are more thoroughly treated. Compresses soaked in lead-water are then applied, and finally, according to the extent of the disease, ice-bladders are laid on, or the whole part is enveloped in cold-water compresses, which are frequently changed. The redness is more intense at first over the rubbed places, or vesication may ensue, but the epidermis soon becomes dry over the diseased parts, and the skin is slowly tanned. In the course of twenty-four, or at the most forty-eight hours, the disease is cut short, and the temperature and pulse suddenly fall.

(To be concluded.)

Clinical Lecture.

ON A CASE OF ECHINOCOCCUS CYST.

By Calvin Ellis, M.D.,

Professor of Clinical Medicine in Harvard Medical School; Visiting Physician to the Massachusetts General Hospital.

The patient, a native of the Western Islands, 43 years of age, entered the Massachusetts General Hospital on February 10th, 1874. At the age of 20, he left his home and went as a sailor to China, and to the Northwest in a whaler. He then went to Australia, and worked fourteen years as a miner and farmer, and has since lived in the Western Islands, California and Boston.

He reports his parents as healthy, and that he was himself well until eighteen months before entering the hospital, when he first noticed *pain in the epigastrium*, for which he could assign no cause. Five months ago, he perceived *swelling of the abdomen*, which steadily increased. About the exact locality of this, he could not be accurate. He worked for a year as usual, but was then obliged to give up, on account of the swelling and pain in the epigastrium, and for the last six months he has been confined to the house. This pain is often sufficient to prevent sleep, and is accompanied by some pain in other parts of the abdomen and by flatulence. The *appetite* is at times poor, though now pretty good. Food causes no trouble, except a feeling of fulness. The *bowels* have been constipated since the beginning of his illness, and are now opened only by medicine. There has been no difficulty in *micturition*, and no change in the appearance of the *urine*.

He has never noticed any swelling of the extremities. There have been no febrile symptoms, and no yellow discoloration of the skin, which is naturally swarthy. When well, weighed from 175 to 180 pounds; now, 155 to 160. Though the strength has diminished, he states that he could now walk two or three miles, if it were not for the discomfort caused by the distended abdomen. Dyspnœa has not attracted attention particularly, though when he walks up stairs rapidly he perceives a greater difference than formerly. The pulse is normal.

Diagnosis.—Observing the usual rule of considering the rational symptoms fully, before making a physical exploration, we recognize the affection as *chronic.*

All the earlier symptoms point to the *abdomen,* and none have since appeared which might not be explained by disease confined to this part.

The prominent symptoms are *enlargement and pain.* As mere tension and pressure may cause pain, and as it is too common a symptom to connect with any particular disease, we will first consider the various *causes of abdominal enlargement.* They may be found *in the parietes or in the abdominal cavity. We may have a simple increase of the normal tissues, organs, fluids or gases, or modifications of the same, or new formations of various kinds.* In making an eliminative diagnosis, we should limit the field of inquiry as rapidly as is consistent with safety; and, therefore, in a case like this, where the history points to no such derangement of any particular organ as to furnish a clue, we should at once resort to a physical exploration. We can gain nothing by vague speculation as to what is possible. We need more material to work with. We may say, however, that we cannot connect the change with any disease which is the consequence of an acute inflammatory process, as there is no mention of any facts pointing to this.

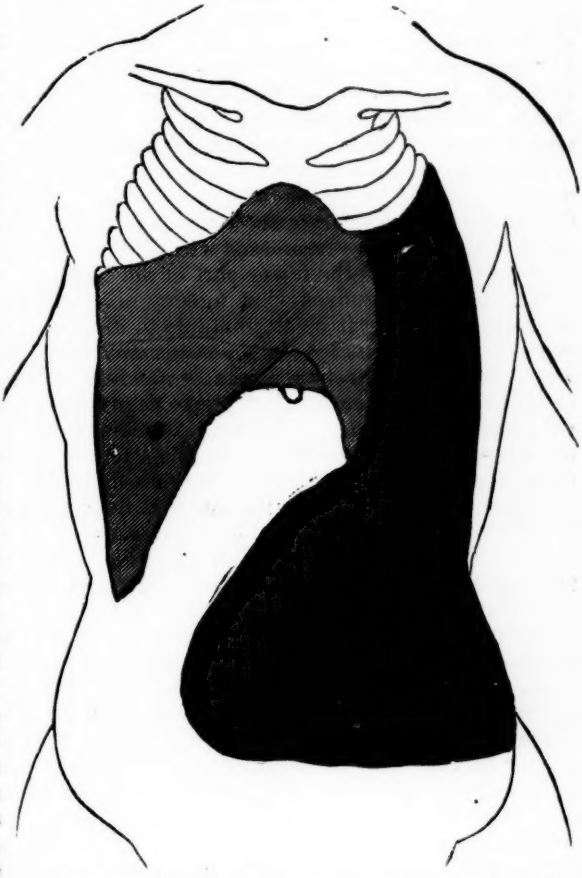
We notice at once *a great enlargement of the whole abdomen,* which measures forty-five inches through the umbilicus. We notice, also, that this enlargement *affects the upper part covered by the ribs, as well as the lower.* We are impressed with the idea that some force has caused the expansion of the lower part of the chest as well as the abdomen.

We now ask ourselves what agency may bring about this condition of the parts. Can it be attributable to disease of the parietes themselves? *Is it caused by a great accumulation of adipose tissue?* It would certainly be very remarkable if, while our patient has lost twenty pounds in weight, fat should have accumulated to such an extent in the abdominal parietes. The very appearance of the external surface negatives such a supposition. It has a tense, shining look, which indicates distention, and this is never seen in an accumulation of adipose tissue. Neither does the latter force out the ribs, as in our case. If we look more closely, we have still stronger evidence of some other cause. *The external surface is irregularly nodulated,* though the nodules are few in number, quite flat and rather indefinite. They vary from one to six inches in diameter. We might, perhaps, have something of this appearance from a tumor in the parietes, but it would in that case be confined to one part of the abdomen, and would not cause such general distention. *We have reason to think that the disease lies beneath the parietes,* but the sense of sight can carry us no farther.

Such a change of form may be caused by distention of the intestines by gas, or by some new formation within the peritoneal cavity. We must use the senses of touch and hearing to bring us nearer to our aim. On *palpation,* we find these *nodules tense and elastic.* The sensation is that communicated by *aëriform, fluid or semi-fluid matter.* We notice a greater resistance than usual to pressure, but no distinct outline can be made out, while the ribs interpose an unyielding wall above.

We must make use of *percussion,* and this shows at once that the matter is *not aëriform,* that there is an *absence of the ordinary resonance* of the part, that there is *perfect flatness* on percussion, while the right side

of the abdomen is unusually resonant, and that this resonance is such as belongs to the distended intestines, and that it gradually blends with that in the upper part, which indicates the presence of the stomach. We have now to inquire whether the flatness is attributable to *some change of the intestines or their contents, or to some body which occupies their place.* We have no symptom connected with the intestines which would lead us to suspect that the disease involved them, as the only difficulty has been constipation, which would be the natural result of such pressure. The line which separates the flat from the resonant portion is too uniform, the flatness too complete and too continuous to allow us to admit any of the usual diseases of the intestines or any accumulation of their contents. We must, therefore, conclude that we have *some body which has displaced the intestines, and crowded them into the right side and upper part of the abdomen.*



We must now endeavor to ascertain *the nature of this formation.* But, before attempting to decide upon its character, we must bear in mind that we do not yet know *its extent,* and this knowledge is essential. As it disappears beneath the ribs, the sense of touch will not aid us; we must again resort to careful *percussion.* The line of dulness in front rises as high as the second rib over the sternum, extends to the right, downwards and outwards around the chest, to a point two inches above the lower angle of the scapula, while on the left side it rises to the axilla, then follows the spine of the scapula, and falls obliquely downwards to the eighth dorsal vertebra.

The lower limits are well shown, and require no detailed description.

You will notice that there is an *absence of the usual complete flatness*

in the cardiac and hepatic regions, though the dulness is very decided here when compared with the resonance around. You will also notice that the *dulness of the cardiac region rises higher than usual*, and we must satisfy ourselves in regard to the cause of this as well as of the shade of resonance. We cannot be guided by the form of the dulness, as it is continuous with that which extends around the body on both sides. The location and character of the sound and impulse, however, may prove sufficient. The impulse is found to be most marked between the fourth and fifth ribs; that is, one rib higher than usual, which corresponds with the elevation of the upper line of dulness. Auscultation shows the normal sounds in this region. We are, therefore, justified in believing that *the organ is simply displaced upwards.*

Knowing that this is the case, we can now *explain the modification of the flatness.* Immediately below the heart is the tympanitic resonance of the stomach and intestine. As the tension must be great to cause this displacement, we have good reason for believing that the flatness is modified by the gas contained within these hollow organs.

Let us now examine the *dulness of the lower part of the right side of the chest.* Here, too, there is absence of the complete flatness ordinarily found, and we must explain it if possible. We have no such facilities for proving that the liver is beneath the surface as in the case of the heart, but are obliged to rely upon the sounds yielded by percussion. But knowing that this is the hepatic region, that the form of dulness is that of the liver, that the normal pulmonary resonance and respiration are heard just above the line of dulness, and that other parts are displaced, we may fairly conclude that the *liver is simply pushed higher up than usual*, and that the *increase of sound is owing to the upward pressure of the intestines.* This happens so often under other circumstances, the area of dulness is so often diminished when the intestines are distended, that we can never conclude that the size of the organ is diminished by percussion alone.

We have now ascertained that the heart and liver are simply displaced; the absence of symptoms is explained by the absence of any change we can appreciate, except that of position.

We have now to consider *whether the change from resonance to flatness in those parts of the chest usually occupied by the lungs be attributable to a similar displacement of these organs.* We have already spoken of the right lung in connection with the liver. The posterior dulness on the left side may be owing to some change in the lung itself, to the presence of some fluid or solid in the pleural cavity, or to the projection of the abdominal mass upwards.

On percussion, we find normal resonance, and the normal respiratory sound above the line of dulness, by which both are abruptly limited. When there is disease of the pulmonary tissue, some abnormal sound will be heard in the large majority of cases; but as none such is heard, and no symptoms give us reason to infer that disease exists, we may conclude that the cause of dulness is outside of and beneath the lung. As the line does not vary with the change of position, and as there is no bronchial respiration or modification of the voice over the flat region of the chest, we cannot admit that the abnormal condition is attributable to fluid within the pleural cavity, and it certainly seems unnecessary to suppose that we have some new formation here entirely distinct from that in the abdomen, when it seems to be perfectly contin-

uous with it. We may, therefore, justly conclude that *we have a single large irregular mass, through whose agency the different organs mentioned have been pushed aside.*

The next question to decide is, *what organ or tissue is the seat of this formation and where it originated.* No symptom, no physical sign will enable us to connect it with the lung. The flatness is continuous with that of the *spleen*, and we may well ask *whether it may not be an enlargement of this organ.* There is no history which calls attention to the spleen, and the form is not that which an enlarged spleen assumes; the mass projects more at the lower part, and fills less of the upper portion of the abdomen than this organ does when enlarged uniformly.

In regard to the *kidney*, the history excites no suspicion. An examination shows nothing abnormal, except a specific gravity of 1·030, a small amount of sugar and a considerable number of crystals of oxalate of lime. The presence of sugar might prove of importance if found to be constant; but we need not consider it here, as it has no apparent bearing upon the tumor.

Failing to ascertain the exact seat or connection of the tumor, let us endeavor to ascertain its *character*, as this may aid us in determining its seat. Its slight compressibility and great elasticity suggest a *fluid contained within a tense membrane, or a soft solid.* The absence of any fluctuation does not prove that it is not a fluid, as with a certain tenseness of the containing walls we may have no fluctuation, and the structure may be such as to prevent the transmission of the wave. Still, we must bear in mind that some of the solid growths simulate, in some respects, collections of fluid; that they may not only contain cysts, but that fatty, fibroid, myxomatous, sarcomatous and cancerous formations may be of such consistence as to give indications identical with those of fluid. But we must also remember that these peculiar properties belong to fluidity, and are only present when fluid to a certain extent is combined with the solid; so that if reduced to this test alone, we must consider that we have a fluid rather than a solid. Still further, *fibroid growths*, of this size, in this situation, are very rare, and would probably appear much firmer. *Myxomas and sarcomas* are also very rare. A *cancerous growth* would probably be attended by much more constitutional disturbance. The indications being, therefore, that we have a *fluid*, we have reason to believe that *this fluid is contained in a cavity or cavities distinct from that of the peritoneum*, as the mass is limited to one side of the abdomen and presents a uniform outline. Even if such a regular adhesion of the intestine were possible, we should not expect it to take place so completely as to cut off a portion of the cavity without any previous symptoms of inflammation. The *large nodules* which are seen and felt on the surface *indicate that there are sacs of various sizes.*

Having reached this point, we are prepared to ask *what kind of cysts are likely to form.* They may be owing to some *change in the tissues* or to the presence of *parasites.*

The *kidney* is frequently the seat of cystic formations. These are of two kinds. In the first, we have one or more cysts, generally very small, but possibly as large as a man's head, supposed by many to result from an occlusion of the tubuli. In the second variety we have an immense aggregation of cysts, occupying the place of the ordinary renal structure; but these are found so early in life they are supposed

to be congenital. The size and form of the growth we are investigating would make the presence of either of these very improbable, unless everything else were excluded.

Simple cystic formations in the *spleen* are very rare, and need not detain us.

Another variety of cyst is that caused by *the introduction within the body of the germs of the echinococcus.* The cyst thus formed may attain any size compatible with the life of the patient, and we are likely to have nodules, as in the case before us. It may be developed without interfering with the function of any organ and, without causing any more constitutional disturbance than may be fairly attributable to compression. But we have nothing absolutely characteristic, as the peculiar "tremor" noticed in some cases is not felt, and we must admit that, although the last variety of cyst is much the most probable, we lack the absolute proof that it is present. *We have only reached the point of relative probability.*

But we fortunately have means in reserve which may enable us to ascertain exactly the character of this enlargement, after satisfying ourselves that the mass will admit of puncture without injury. We may pierce it with a delicate trocar, attached to a *pneumatic aspirator*, and prove the correctness or incorrectness of our supposition. The trocar being thrust into one of the smallest prominences, about an ounce of *perfectly clear fluid* is withdrawn. The appearance of this strengthens our belief, but its chemical character is of greater importance than its limpidity, as we are told by Frerichs that the only cyst in the body which contains *fluid without albumen* is that of the echinococcus. *The application of the ordinary tests shows that no albumen is present.* There is another point connected with the withdrawal of the fluid which is interesting, as it has a bearing upon the multilocular character of the mass. After the withdrawal of the fluid, the *small nodule disappeared.* Had this prominence been only a part of a large cavity, the remaining fluid would have distended it as before. We have reason, therefore, for believing that we emptied a single cyst only, and that, by repeating the puncture in another part, still stronger evidence of its true character may be obtained. This being done, the same limpid fluid escapes, but the flow is suddenly arrested. Let us examine the canula. We notice, in the end, *a minute fragment of a white gelatinous material.* On placing this under the microscope, we see *the peculiar striations which belong to the cyst of the echinococcus.*

Our minds being now clear in regard to the *character* of the disease, we may again attempt to answer the question about its *seat.* As the echinococcus has no special seat, but may locate itself in any of the organs or tissues of the body, we are no better able to answer the question than before.

As the disease is rare in this country, it may not be unprofitable to give you a brief account of it. A minute *tape-worm*, the *tænia echinococcus*, is at times found in large numbers in the intestines of dogs, particularly in Iceland. The ova of these worms are discharged, and are accidentally introduced, probably in the food, into the stomach and intestines of human beings. The ova are there hatched, and the resulting embryos penetrate the walls of the alimentary canal, and make their way or are carried in the circulating blood to all parts of the body, where they undergo a limited development and form the *scolices.*

These are round or oval bodies, from one-fifth to one-twentieth of a line in length, the shape varying according to the projection or retraction of the head. I will not enter into minute details of structure, as such may be found in your text-books, but will only mention some of the most striking features which may aid us in diagnosis. Upon the head are two rows of hooklets, which may become detached, and are at once recognized when seen under the microscope. The irritation caused by the presence of these parasites excites the action of the surrounding tissues, which ends in the formation of a dense cyst continuous with the adjacent parts. Within this dense membrane is found a soft, white gelatinous cyst, the walls of which, under the microscope, show a delicate striation. The inner surface is often studded with minute points, which indicate the presence of broods of echinococci. This cyst is the parasite distended by the clear fluid already seen. Within it may also be found an infinite number of secondary cysts, and within these, perhaps, tertiary cysts. Floating in the fluid are at times more or less perfect scolices, or fragments of the same. For either of these we have looked in vain, but their absence is not unusual, as many of the cysts may be "barren," and contain no descendants.

You are now prepared to understand why the development and multiplication of these cysts may cause such enormous enlargement and distention of the body.

The Prognosis is always doubtful, as the cysts tend to enlarge and may be attacked by inflammation. They may prove fatal by compressing various organs, or by rupturing into the pleura, pericardium, peritoneum, or some large bloodvessel. They may, on the other hand, open externally, or into the bronchi and intestines, and their contents be discharged, with relief to the patient. They may also shrivel, or become cartilaginous or calcareous. But this favorable result is seen in the smaller cysts, which escape observation. Hence we cannot safely leave our patient to nature.

Treatment.—The treatment should be such as tends to arrest the growth and secure the diminution or expulsion of the cysts. Surgical interference has been successful in securing these ends, but it has also been attended by fatal results.

Unless the trocar used in puncturing be very fine, inflammation may be excited by the escape of the fluid into the peritoneal cavity. On this account, none of the more effectual methods of treatment should be resorted to hastily. A patient may live ten or twenty years, or more, but generally not so long. When once detected, the disease is liable to prove fatal in from one to four years.

When, therefore, the walls of the chest or abdomen are forced out, we should be prepared to act. A single puncture may be followed by recovery. When repeated, the fluid from the later puncture may be purulent. The simple puncture succeeds when the wall is thin and elastic, and there are few or no secondary cysts. Injections of water, iodine and other things, may be used. The difficulty is to make an opening large enough to allow the cysts to escape without exciting dangerous inflammation. For this purpose caustic has been employed, but the adhesions excited by it are not always firm. An incision may be made if the tumor project and the skin be reddened.

With the exception of the punctures made, the only interference with the patient has been to regulate the diet and relieve the constipation.

Boston Medical and Surgical Journal.

Boston: Thursday, June 4, 1874.

At the late meeting of the Social Science Association in New York, two of the most important medical papers were on "Tent Hospitals," by Dr. J. W. Jenkins, of Yonkers, and on "School Hygiene," by Dr. D. F. Lincoln, of Boston. We do not consider the former, because the matter comes up at this week's meeting of our State Society. There are some points in Dr. Lincoln's paper that deserve to be noticed at greater length than is possible in this number. With regard to the problem of ventilation, we may as well look the fact in the face that good ventilation is necessarily expense. The air that escapes is heated, and much warmth is necessarily thrown away with it. It is impossible to admit fresh air into schoolrooms, crowded as they generally are, without serious exposure to many of the pupils. Dr. Lincoln held that the expense of having more rooms would be a good investment, in view of the great benefit that the health of the children would receive from it. The construction of the seats and desks was duly considered in regard to its effect on the shape of the body. It is so evident that the seat should not be far enough from the desk to permit the occupant to stand between them, that we cannot refrain from hoping that in stating this fact Dr. Lincoln was merely laying down general law, and not criticizing any furniture now in use. We also entirely agree with him that "it is a good plan to make the lid in two pieces, so that the near piece swings up on hinges, furnishing a book-holder when not used to write upon." The reader strongly urged the introduction of light gymnastics.

This last subject brings to our minds an event which we hope is not without significance. While we fear we must admit the truth of much that is said concerning the physical degeneration of our women, we are inclined to think that the same is not true when applied to the men. A few weeks ago, two foot-ball matches were played between ten picked men of McGill University, of Canada, and the same number from Harvard University, on the grounds of the latter. The match of the first day consisted of three games, played according to the American rules, that of the second day of three according to the English rules, which latter limit the game to half an hour. Neither college had any practical knowledge of the rules of the other's game, so that mistakes requiring rectification were frequent on both sides, but as the English game is most complicated, the Harvard men were in this respect rather at a disadvantage, though perhaps this was more than

compensated for by being at home, familiar with the ground, and surrounded by their friends. The Harvards won all three games of the first day's contest, while those of the second ended in draws, a result which far exceeded the most sanguine expectations of their friends. We were equally surprised and pleased to learn, although it diminishes the glory of the victory, that this was due to the superior weight and strength of the Harvard students.

We understand that the American Missionaries in Central Turkey are endeavoring to establish a College at the city of Aintaf, and that they propose to have a Medical Department connected with this college. We have been shown an interesting paper, prepared by H. S. West, M.D., and entitled, "*Reasons for the Establishment of a Medical School in the Interior of Turkey.*" Dr. West has resided in Asia Minor as a Medical Missionary of the American Board for the past sixteen years. He has had an extensive practice, and evidently speaks from a personal knowledge of the subject. The reasons which he presents are certainly such as will meet the approval of the profession in this country. Those who wish to obtain a copy of these reasons, together with a statement in regard to the proposed College, can do so by applying to T. C. Trowbridge, Rooms of the A.B.C.F.M. Cong. House, Boston. The undertaking was heartily endorsed in New York by a meeting of well-known physicians, held at the house of Prof. Willard Parker, who was appointed Chairman of a Committee to receive contributions. Contributions of money, medical books, medicines, hospital furniture, surgical instruments and philosophical apparatus are respectfully solicited. They may be sent to Mr. Trowbridge, to the above address. Mr. Trowbridge is the authorized agent for the proposed College and Medical School. The Board of Trustees in this country is composed of the following gentlemen:—

1. Ezra Farnsworth, Esq., Boston, Mass., *President.* 2. Jas. M. Gordon, Esq., Boston, Mass., *Treasurer.* 3. N. G. Clark, D.D., Boston, Mass. 4. R. H. Stearns, Esq., Boston, Mass. 5. H. Lee Norris, Esq., Princeton, N. J. 6. W. M. Taylor, D.D., New York. 7. Noah Porter, D.D., New Haven, Conn. 8. W. H. Thomson, M.D., New York.

The Hospitals.

MASSACHUSETTS GENERAL HOSPITAL.

(Wednesday and Saturday, May 20 and 23, 1874.)

Operations were performed in the following cases:—Fistula in Ano, Talipes Equino-varus, Cancer of Penis, Talipes Equino-varus, Syphilitic Ulceration of Larynx, Stricture of Urethra with Extravasation of Urine, Disease of Knee-joint, Disease of Toe-joint, Parotid Tumor, Epithelial Cancer

of Lip. During the week, Railroad Injury of Leg and Foot, Nævus, Hæmorrhoids, Caries. Three seances of Lithotrity in two cases of Vesical Calculus.

Fistula in Ano—in a man. Laid open by Dr. Clark.

Talipes Equino-varus—single, in a baby six months old. Tenotomy of tendo Achillis.

Cancer of Penis—of four years' duration, following a "chancre," in a man thirty-six years old. It consisted of a hard, nodular, ulcerating mass, as large as an English walnut, involving the whole prepuce, but leaving the glans penis unaffected. The whole mass was excised without opening the urethra; the fresh border of the remaining integument was stitched to the base of the glans.

Talipes Equino-varus—single, in a child sixteen months old. Dr. Clark divided the tendo Achillis.

Tracheotomy, on account of Syphilitic Ulceration of the Larynx—in a woman twenty-four years old. Frequent attacks of spasmodic closure of the glottis had occurred, and she was at times in great danger from asphyxia. Operation by Dr. Clark.

Stricture of Urethra with Extravasation of Urine (case reported May 21 and 28).—The bladder had been relieved from day to day by punctures over the pubes and evacuation by the aspirator. All attempts to enter the bladder had been unsuccessful on account of extensive laceration of the urethra before admission to the hospital. The extravasation occurred suddenly, three hours before the operation. The penis was enormously distended, the cellular tissue above the pube involved, and the bladder reached to the umbilicus. Perineal section was performed, and the urethra opened behind the stricture. A bougie was then passed forward from this opening through the stricture until it emerged from the meatus. Using the bougie as a guide, the filiform bougie of Voillemier's divulsor was passed through the stricture, the instrument then attached and made to follow. The stricture was ruptured with a large tube, and a number 12 elastic catheter passed into the bladder and left, after evacuating nearly two quarts of urine. Free incisions were made in the integument of the penis, in the groins, and over the pubes down to the aponeuroses; wherever the urine had been in contact with the cellular tissue its fatal effects were already apparent.

Disease of the Knee-joint—of one year's duration, in a woman twenty-three years old. For ten months, her history had been that of chronic synovitis; but, latterly, hectic, night-sweats increasing, and other constitutional symptoms had developed. Amputation of the thigh, by the flap method, at the junction of the middle and lower thirds, was performed by Dr. Clark.

Disease of Toe-joint—in a boy five years old. A fistulous opening communicated with the diseased surface. Amputation of toe by Dr. Clark.

Parotid Tumor—of the size of a hen's egg, and four years' growth in a man, forty-two years old; a curved incision of three inches was made through the skin, the superficial layer of normal gland tissue, usually found covering tumors of this sort, was exposed and divided; the growth was then removed. The vessels were tied and the wound closed by sutures.

Epithelial Cancer of Lip.—An ulcerating and painful growth, of the size of a pea, situated just below the nostril, in a woman fifty-two years of age. Excised by Dr. Clark.

Railroad Injury of Leg and Foot—in a boy nine years old; the bones of the leg and foot were crushed, and the soft parts extensively lacerated; the ankle-joint was involved. Amputation by double flaps at the knee-joint.

Nævus—involving the external half of the conjunctival surface of the lower eyelid, in a baby four months old. The lid was everted and the growth destroyed by the galvano-cautery.

Hæmorrhoids—in a woman. Tied by Dr. Clark.

Caries—of tibia, following a blow, in a boy three years old. The disease was located in the lower third of the bone, and did not communicate with the joint. The fistulous openings were laid open, and the dead bone removed by the spherical rasp.

H. H. A. BEACH.

Medical Miscellany.

THE American Medical Association meets next week in Detroit. We believe that two gentlemen have, at their own request, been appointed delegates at large from Massachusetts. As far as we know, none of the District Societies have thought it worth while to send delegates.

HÆMORRHOIDS.—"In a large proportion of persons who suffer from hæmorrhoids, the primary cause is in the liver. Hæmorrhoids are a common result of structural changes in the liver, such as cirrhosis; but they are, also, a frequent attendant of functional derangements, and especially of the loaded state of the liver common in lithæmia."—*From a Lecture of Charles Murchison, M.D.*

ETHER AND CHLOROFORM.—"We are able to say that in the present state of science the medical man *is responsible for every case of death occasioned by the application of ether*, because a careful watching of the respiration is capable of preventing death, whilst the lethal effect of chloroform depends in part on individual predisposition, which the physician is unable to recognize."—*Prof. Schiff, of Florence.*

ACCORDING to the *Lancet*, certified medical men are so scare in Crete, and their fees are so exorbitant, that the government has been absolutely driven to invite the services of quacks. Only fifteen properly qualified physicians are available among a population of 300,000, and they reside, without exception, in the towns, where the peasantry, when ill, have to call on them; £1 is their fee to the nearest village, while £4, £5, £6, and even £10 are charged for visits further inland.

FIVE-AND-A-HALF MONTHS' FŒTUS.—At a recent meeting of the Obstetrical Society of London, Dr. Edis exhibited a fœtus presumed to be only five months and ten days. Premature labor resulted from a fall a week previous. Immediately after the birth of the child, it cried so loudly that it was distinctly heard down stairs, and continued at intervals to cry as loudly as a full-grown infant. Its weight was one pound and a quarter, and length eleven inches. It was fed with gruel, but could not be made warm, and lived but forty-four hours.—*The British Medical Journal.*

AT a meeting of the undersigned, held May 20th, at the residence of Dr. J. B. Gale, the following resolutions were adopted:—

Whereas, the Great Physician, in the exercise of His omnipotent wisdom and power, has removed from the sphere of earthly activities our honored associate and co-laborer, Thomas Sparhawk, M.D., for thirty years a practising physician of Amesbury, and late of Newburyport, therefore—

Resolved: That in the death of Dr. Sparhawk the profession has lost an intelligent and successful practitioner, the medical fraternity a safe counsellor and ever true friend.

Resolved: That in our professional and private intercourse with the deceased he ever exhibited those sterling qualities of Christian excellence and manliness which commanded our respect and challenged our emulation. And we mutually resolve that his proverbial kindness to the poor, and consideration for the suffering shall be imitated by us.

Resolved: That we extend to the family and relatives of our brother our earnest sympathy and fraternal regard.

Resolved: That a copy of these resolutions be forwarded to the family of Dr. Sparhawk, and to the *Merrimac Journal*, *Villager*, *Newburyport Herald* and *Boston Medical and Surgical Journal*, for publication.

J. B. GALE, M.D.,
JOHN A. DOUGLASS, M.D.,
H. G. LESLIE, M.D.,
THOS. S. MCALLISTER, M.D.,
CHARLES S. YOUNG, M.D.

CHOLERA has appeared in the suburbs of Calcutta.

BRISTOL SOUTH DISTRICT MEDICAL SOCIETY.—The following officers have been elected for the ensuing year:—

President.—Dr. E. T. Learned.
Vice President.—Dr. C. D. Stickney.
Secretary and Treasurer.—Dr. C. D. Prescott.
Councillors.—Drs. E. P. Abbé, J. Dwelley, F. H. Hooper, F. A. Sawyer, J. B. Whittaker.
Censors.—Drs. Geo. Atwood, B. J. Handy, H. Johnson, C. D. Prescott, J. J. B. Vermyne.
Commissioner on Trials.—Dr. C. L. Swasey.

ESSEX SOUTH DISTRICT MEDICAL SOCIETY.—The following officers have been elected for the ensuing year:—

President.—Dr. E. B. Peirson.
Vice President.—Dr. Edward Newhall.
Secretary.—Dr. C. A. Carlton.
Treasurer.—Dr. Wm. Mack.
Librarian.—Dr. Wm. Neilson.
Councillors.—Drs. J. F. Galloupe, E. Hunt, A. H. Johnson, Geo. Osborne, E. B. Peirson, G. A. Perkins, Daniel Perley, A. Torrey.
Censors.—Drs. Arthur Kemble, O. B. Shreve, J. O. Webster.
Commissioner on Trials.—Dr. A. Torrey.

NOTES AND QUERIES.

RECIPE FOR "KOUMISS."

MESSRS. EDITORS,—The following formula for the above-named preparation, inquired for by Dr. J. L. Prentiss, of Canon City, Colorado, in your JOURNAL of May 7, 1874, is that of Dr. Townsend, of Cork.

A. BIGELOW, M.D.

Toledo, Ohio, May 23, 1874.

"R. New milk, one quart; good thick milk (sour?) or fresh buttermilk, one noggin [a noggin is one gill]; white sugar, three or four lumps. Mix thoroughly till the sugar is dissolved; keep in a warm place in a jug ten hours; pour from jug to jug till quite smooth; bottle in soda-water bottles, velvet corks, tied down; let remain in warm place twenty-four hours in summer, thirty-six in winter. Shake well before taken. Its fermentation is the test of excellence. Drink in quantities."

DIED,—In this city, May 25, of pneumonia, George Fabyan, M.D., 64 years.

MORTALITY IN MASSACHUSETTS.—*Deaths in fifteen Cities and Towns for the week ending May* 23, 1874.

Boston, 146; Worcester, 22; Lowell, 19; Salem, 8; Lawrence, 10; Springfield, 9; Lynn, 9; Gloucester, 4; Fitchburg, 1; Taunton, 10; Newburyport, 6; Somerville, 5; Fall River, 18; Haverhill, 8; Holyoke, 8. Total, 283.

Prevalent Diseases.—Consumption, 55; pneumonia, 32; scarlet fever, 18.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, May 30th, 127. Males, 66; females, 67. Accident, 1; apoplexy, 3; inflammation of the bowels, 3; disease of the bladder, 1; bronchitis, 5; disease of the brain, 6; cancer, 3; cerebro-spinal meningitis, 2; consumption, 22; convulsions, 3; debility, 1; dropsy, 1; dropsy of the brain, 7; drowned, 1; dysentery, 1; erysipelas, 3; scarlet fever, 5; typhoid fever, 1; bilious fever, 1; hernia, 2; disease of the heart, 8; disease of the hip, 1; intemperance, 1; disease of the kidneys, 4; disease of the liver, 2; congestion of the lungs, 3; inflammation of the lungs, 13; marasmus, 4; neuralgia, 1; old age, 9; paralysis, 2; pleurisy, 2; premature birth, 2; peritonitis, 1; puerperal disease, 3; stricture of the urethra, 1; teething, 1; tumor, 1; ulceration of the bowels, 1; whooping cough, 1; unknown, 1.

Under 5 years of age, 43; between 5 and 20 years, 14; between 20 and 40 years, 22; between 40 and 60 years, 28; over 60 years, 20. Born in the United States, 86; Ireland, 30; other places, 11.